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<110> Macina, Roberto A
Nair, Manoj
Chen, Seiyu

<120> Compositions and Methods Relating to Lung Specific
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<151> 2000-07-21

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<400> 24
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<400> 25
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<400> 27
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<210> 38

<211> 2475

<212> DNA

<213> Homo sapiens

<220>
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 <222> (1001)

<220>
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 <222> (1011)

<400> 38
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<210> 39
 <211> 436
 <212> PRT
 <213> Homo sapiens

<400> 39

31

Glu Trp Ile Ser Tyr Ile Arg Gly Gly Gly Glu Arg Ile Tyr Tyr Ala
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Asp Ser Val Arg Gly Arg Phe Thr Val Ser Arg Asp Asn Ala Lys Asn
20 25 30
Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val
35 40 45
Tyr Phe Cys Ala Arg Glu Pro Pro Ala Pro Asn Tyr Phe Asp Cys Trp
50 55 60
Ser Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro
65 70 75 80
Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Gly Gly Thr
85 90 95
Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr
100 105 110
Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro
115 120 125
Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr
130 135 140
Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Thr Cys Asn Val Asn
145 150 155 160
His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Leu Lys Thr
165 170 175
Pro Leu Gly Asp Thr Thr His Thr Cys Pro Arg Cys Pro Glu Pro Lys
180 185 190
Ser Cys Asp Thr Pro Pro Pro Cys Pro Arg Cys Pro Glu Pro Lys Ser
195 200 205
Cys Asp Thr Pro Pro Pro Cys Pro Arg Cys Pro Ala Pro Glu Leu Leu
210 215 220
Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
225 230 235
Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
245 250 255
His Glu Asp Pro Glu Val Gln Phe Lys Trp Tyr Val Asp Gly Val Glu
260 265 270
Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr
275 280 285
Phe Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
290 295 300
Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro

305		310		315		320
Ile Glu Lys Thr	Ile Ser Lys Thr	Lys Gly Gln Pro Arg Glu Pro Gln				
	325		330			335
Val Tyr Thr Leu	Pro Pro Ser Arg	Glu Glu Met Thr Lys Asn Gln Val				
	340		345			350
Ser Leu Thr Cys	Leu Val Lys Gly	Phe Tyr Pro Ser Asp Ile Ala Val				
	355		360			365
Glu Trp Glu Ser	Ser Gly Gln Pro	Glu Asn Asn Tyr Asn Thr Thr Pro				
	370		375			380
Pro Met Leu Asp	Ser Asp Gly Ser	Phe Phe Leu Tyr Ser Lys Leu Thr				
	385		390			395
Val Asp Lys Ser	Arg Trp Gln Gln	Gly Asn Ile Phe Ser Cys Ser Val				
	405		410			415
Met His Glu Ala	Leu His Asn Arg	Phe Thr Gln Lys Ser Leu Ser Leu				
	420		425			430
Ser Pro Gly Lys						
	435					

<210> 40
 <211> 168
 <212> PRT
 <213> Homo sapiens

<400> 40
Pro Gln Leu Ala Cys Leu Phe Gln Val Lys Ser Gly Ser Pro Ala Val
1 5 10 15
Leu Ala Phe Ala Lys Glu Lys Ser Phe Gly Trp Pro Ser Phe Ile Thr
20 25 30
Tyr Thr Val Gly Val Ser Asp Pro Ala Ala Gly Ser Gln Gly Pro Leu
35 40 45
Ser Thr Thr Leu Thr Phe Ser Ser Pro Val Thr Asn Gln Ala Ile Ala
50 55 60
Ile Pro Val Thr Val Ala Phe Val Met Asp Arg Arg Gly Pro Gly Pro
65 70 75 80
Tyr Gly Ala Ser Leu Phe Gln His Phe Leu Asp Ser Tyr Gln Val Met
85 90 95
Phe Phe Thr Leu Phe Ala Leu Leu Ala Gly Thr Ala Val Met Ile Ile
100 105 110
Ala Tyr His Thr Val Cys Thr Pro Arg Asp Leu Ala Val Pro Ala Ala
115 120 125
Leu Thr Pro Arg Ala Ser Pro Gly His Ser Pro His Tyr Phe Ala Ala
130 135 140

Ser Ser Pro Thr Ser Pro Asn Ala Leu Pro Pro Ala Arg Lys Ala Ser
 145 150 155 160

Pro Pro Ser Gly Leu Trp Ser Pro
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<210> 41

<211> 78

<212> PRT

<213> Homo sapiens

<400> 41

Val Ser Glu Gly Ala Thr Trp Ala Ile Gly Phe Pro Ala Ser Phe Pro
 1 5 10 15

Leu Phe Leu Ala Pro Ala Ala Glu Ala Gly Arg Pro Trp Arg Thr Ser
 20 25 30

Trp Gly Leu Thr Ala Ala Ser Pro Gly Ser Ser Trp Gly His Leu Ser
 35 40 45

Ser Lys Val Cys Thr Gln Glu Val Pro His His Ile Gln Pro His Gly
 50 55 60

Ser Pro Arg Ser Ala Arg Gln Gln Ile Arg Ala Pro Cys His
 65 70 75

<210> 42

<211> 1118

<212> PRT

<213> Homo sapiens

<400> 42

Met Ala Arg Ser Pro Gly Arg Ala Tyr Ala Leu Leu Leu Leu Ile
 1 5 10 15

Cys Phe Asn Val Gly Ser Gly Leu His Leu Gln Val Leu Ser Thr Arg
 20 25 30

Asn Glu Asn Lys Leu Leu Pro Lys His Pro His Leu Val Arg Gln Lys
 35 40 45

Arg Ala Trp Ile Thr Ala Pro Val Ala Leu Arg Glu Gly Glu Asp Leu
 50 55 60

Ser Lys Lys Asn Pro Ile Ala Lys Ile His Ser Asp Leu Ala Glu Glu
 65 70 75 80

Arg Gly Leu Lys Ile Thr Tyr Lys Tyr Thr Gly Lys Gly Ile Thr Glu
 85 90 95

Pro Pro Phe Gly Ile Phe Val Phe Asn Lys Asp Thr Gly Glu Leu Asn
 100 105 110

Val Thr Ser Ile Leu Asp Arg Glu Glu Thr Pro Phe Phe Leu Leu Thr
 115 120 125

Gly Tyr Ala Leu Asp Ala Arg Gly Asn Asn Val Glu Lys Pro Leu Glu
 130 135 140
 Leu Arg Ile Lys Val Leu Asp Ile Asn Asp Asn Glu Pro Val Phe Thr
 145 150 155 160
 Gln Asp Val Phe Val Gly Ser Val Glu Glu Leu Ser Ala Ala His Thr
 165 170 175
 Leu Val Met Lys Ile Asn Ala Thr Asp Ala Asp Glu Pro Asn Thr Leu
 180 185 190
 Asn Ser Lys Ile Ser Tyr Arg Ile Val Ser Leu Glu Pro Ala Tyr Pro
 195 200 205
 Pro Val Phe Tyr Leu Asn Lys Asp Thr Gly Glu Ile Tyr Thr Thr Ser
 210 215 220
 Val Thr Leu Asp Arg Glu Glu His Ser Ser Tyr Thr Leu Thr Val Glu
 225 230 235 240
 Ala Arg Asp Gly Asn Gly Glu Val Thr Asp Lys Pro Val Lys Gln Ala
 245 250 255
 Gln Val Gln Ile Arg Ile Leu Asp Val Asn Asp Asn Ile Pro Val Val
 260 265 270
 Glu Asn Lys Val Leu Glu Gly Met Val Glu Glu Asn Gln Val Asn Val
 275 280 285
 Glu Val Thr Arg Ile Lys Val Phe Asp Ala Asp Glu Ile Gly Ser Asp
 290 295 300
 Asn Trp Leu Ala Asn Phe Thr Phe Ala Ser Gly Asn Glu Gly Gly Tyr
 305 310 315 320
 Phe His Ile Glu Thr Asp Ala Gln Thr Asn Glu Gly Ile Val Thr Leu
 325 330 335
 Ile Lys Glu Val Asp Tyr Glu Glu Met Lys Asn Leu Asp Phe Ser Val
 340 345 350
 Ile Val Ala Asn Lys Ala Ala Phe His Lys Ser Ile Arg Ser Lys Tyr
 355 360 365
 Lys Pro Thr Pro Ile Pro Ile Lys Val Lys Val Lys Asn Val Lys Glu
 370 375 380
 Gly Ile His Phe Lys Ser Ser Val Ile Ser Ile Tyr Val Ser Glu Ser
 385 390 395 400
 Met Asp Arg Ser Ser Lys Gly Gln Ile Ile Gly Asn Phe Gln Ala Phe
 405 410 415
 Asp Glu Asp Thr Gly Leu Pro Ala His Ala Arg Tyr Val Lys Leu Glu
 420 425 430
 Asp Arg Asp Asn Trp Ile Ser Val Asp Ser Val Thr Ser Glu Ile Lys

435	440	445
Leu Ala Lys Leu Pro Asp Phe Glu Ser Arg Tyr Val Gln Asn Gly Thr		
450	455	460
Tyr Thr Val Lys Ile Val Ala Ile Ser Glu Asp Tyr Pro Arg Lys Thr		
465	470	475
Ile Thr Gly Thr Val Leu Ile Asn Val Glu Asp Ile Asn Asp Asn Cys		
	485	490
Pro Thr Leu Ile Glu Pro Val Gln Thr Ile Cys His Asp Ala Glu Tyr		
	500	505
Val Asn Val Thr Ala Glu Asp Leu Asp Gly His Pro Asn Ser Gly Pro		
	515	520
Phe Ser Phe Ser Val Ile Asp Lys Pro Pro Gly Met Ala Glu Lys Trp		
	530	535
Lys Ile Ala Arg Gln Glu Ser Thr Ser Val Leu Leu Gln Gln Ser Glu		
	545	550
Lys Lys Leu Gly Arg Ser Glu Ile Gln Phe Leu Ile Ser Asp Asn Gln		
	565	570
Gly Phe Ser Cys Pro Glu Lys Gln Val Leu Thr Leu Thr Val Cys Glu		
	580	585
Cys Leu His Gly Ser Gly Cys Arg Glu Ala Gln His Asp Ser Tyr Val		
	595	600
Gly Leu Gly Pro Ala Ala Ile Ala Leu Met Ile Leu Ala Phe Leu Leu		
	610	615
Leu Leu Leu Val Pro Leu Leu Leu Leu Met Cys His Cys Gly Lys Gly		
	625	630
Ala Lys Gly Phe Thr Pro Ile Pro Gly Thr Ile Glu Met Leu His Pro		
	645	650
Trp Asn Asn Glu Gly Ala Pro Pro Glu Asp Lys Val Val Pro Ser Phe		
	660	665
Leu Pro Val Asp Gln Gly Gly Ser Leu Val Gly Arg Asn Gly Val Gly		
	675	680
Gly Met Ala Lys Glu Ala Thr Met Lys Gly Ser Ser Ser Ala Ser Ile		
	690	695
Val Lys Gly Gln His Glu Met Ser Glu Met Asp Gly Arg Trp Glu Glu		
	705	710
His Arg Ser Leu Leu Ser Gly Arg Ala Thr Gln Phe Thr Gly Ala Thr		
	725	730
Gly Ala Ile Met Thr Thr Glu Thr Thr Lys Thr Ala Arg Ala Thr Gly		
	740	745
		750

Ala Ser Arg Asp Met Ala Gly Ala Gln Ala Ala Ala Val Ala Leu Asn
 755 760 765
 Glu Glu Phe Leu Arg Asn Tyr Phe Thr Asp Lys Ala Ala Ser Tyr Thr
 770 775 780
 Glu Glu Asp Glu Asn His Thr Ala Lys Asp Cys Leu Leu Val Tyr Ser
 785 790 795 800
 Gln Glu Glu Thr Glu Ser Leu Asn Ala Ser Ile Gly Cys Cys Ser Phe
 805 810 815
 Ile Glu Gly Glu Leu Asp Asp Arg Phe Leu Asp Asp Leu Gly Leu Lys
 820 825 830
 Phe Lys Thr Leu Ala Glu Val Cys Leu Gly Gln Lys Ile Asp Ile Asn
 835 840 845
 Lys Glu Ile Glu Gln Arg Gln Lys Pro Ala Thr Glu Thr Ser Met Asn
 850 855 860
 Thr Ala Ser His Ser Leu Cys Glu Gln Thr Met Val Asn Ser Glu Asn
 865 870 875 880
 Thr Tyr Ser Ser Gly Ser Ser Phe Pro Val Pro Lys Ser Leu Gln Glu
 885 890 895
 Ala Asn Ala Glu Lys Val Thr Gln Glu Ile Val Thr Glu Arg Ser Val
 900 905 910
 Ser Ser Arg Gln Ala Gln Lys Val Ala Thr Pro Leu Pro Asp Pro Met
 915 920 925
 Ala Ser Arg Asn Val Ile Ala Thr Glu Thr Ser Tyr Val Thr Gly Ser
 930 935 940
 Thr Met Pro Pro Thr Thr Val Ile Leu Gly Pro Ser Gln Pro Gln Ser
 945 950 955 960
 Leu Ile Val Thr Glu Arg Val Tyr Ala Pro Ala Ser Thr Leu Val Asp
 965 970 975
 Gln Pro Tyr Ala Asn Glu Gly Thr Val Val Val Thr Glu Arg Val Ile
 980 985 990
 Gln Pro His Gly Gly Gly Ser Asn Pro Leu Glu Gly Thr Gln His Leu
 995 1000 1005
 Gln Asp Val Pro Tyr Val Met Val Arg Glu Arg Glu Ser Phe Leu Ala
 1010 1015 1020
 Pro Ser Ser Gly Val Gln Pro Thr Leu Ala Met Pro Asn Ile Ala Val
 1025 1030 1035 1040
 Gly Gln Asn Val Thr Val Thr Glu Arg Val Leu Ala Pro Ala Ser Thr
 1045 1050 1055
 Leu Gln Ser Ser Tyr Gln Ile Pro Thr Glu Asn Ser Met Thr Ala Arg
 1060 1065 1070

Asn Thr Thr Val Ser Gly Ala Gly Val Pro Gly Pro Leu Pro Asp Phe
 1075 1080 1085

Gly Leu Glu Glu Ser Gly His Ser Asn Ser Thr Ile Thr Thr Ser Ser
 1090 1095 1100

Thr Arg Val Thr Lys His Ser Thr Val Gln His Ser Tyr Ser
 1105 1110 1115

<210> 43

<211> 97

<212> PRT

<213> Homo sapiens

<400> 43

Met Thr Lys Gly Thr Ser Ser Phe Gly Lys Arg Arg Asn Lys Thr His
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Thr Leu Cys Arg Arg Cys Gly Ser Lys Ala Tyr His Leu Gln Lys Ser
 20 25 30

Thr Cys Gly Lys Cys Gly Tyr Pro Ala Lys Arg Lys Arg Lys Tyr Asn
 35 40 45

Trp Ser Ala Lys Ala Lys Arg Arg Asn Thr Thr Gly Thr Gly Arg Met
 50 55 60

Arg His Leu Lys Ile Val Tyr Arg Arg Phe Arg His Gly Phe Arg Glu
 65 70 75 80

Gly Thr Thr Pro Lys Pro Lys Arg Ala Ala Val Ala Ala Ser Ser Ser
 85 90 95

Ser

<210> 44

<211> 889

<212> PRT

<213> Homo sapiens

<400> 44

Met Ala Ala Ala Val Gly Val Arg Gly Arg Tyr Glu Leu Pro Pro Cys
 1 5 10 15

Ser Gly Pro Gly Trp Leu Leu Ser Leu Ser Ala Leu Leu Ser Val Ala
 20 25 30

Ala Arg Gly Ala Phe Ala Thr Thr His Trp Val Val Thr Glu Asp Gly
 35 40 45

Lys Ile Gln Gln Gln Val Asp Ser Pro Met Asn Leu Lys His Pro His
 50 55 60

Asp Leu Val Ile Leu Met Arg Gln Glu Ala Thr Val Asn Tyr Leu Lys
 65 70 75 80

Glu Leu Glu Lys Gln Leu Val Ala Gln Lys Ile His Ile Glu Glu Asn
 85 90 95

Glu Asp Arg Asp Thr Gly Leu Glu Gln Arg His Asn Lys Glu Asp Pro
 100 105 110

Asp Cys Ile Lys Ala Lys Val Pro Leu Gly Asp Leu Asp Leu Tyr Asp
 115 120 125

Gly Thr Tyr Ile Thr Leu Glu Ser Lys Asp Ile Ser Pro Glu Asp Tyr
 130 135 140

Ile Asp Thr Glu Ser Pro Val Pro Pro Asp Pro Glu Gln Pro Asp Cys
 145 150 155 160

Thr Lys Ile Leu Glu Leu Pro Tyr Ser Ile His Ala Phe Gln His Leu
 165 170 175

Arg Gly Val Gln Glu Arg Val Asn Leu Ser Ala Pro Leu Leu Pro Lys
 180 185 190

Glu Asp Pro Ile Phe Thr Tyr Leu Ser Lys Arg Leu Gly Arg Ser Ile
 195 200 205

Asp Asp Ile Gly His Leu Ile His Glu Gly Leu Gln Lys Asn Thr Ser
 210 215 220

Ser Trp Val Leu Tyr Asn Met Ala Ser Phe Tyr Trp Arg Ile Lys Asn
 225 230 235 240

Glu Pro Tyr Gln Val Val Glu Cys Ala Met Arg Ala Leu His Phe Ser
 245 250 255

Ser Arg His Asn Lys Asp Ile Ala Leu Val Asn Leu Ala Asn Val Leu
 260 265 270

His Arg Ala His Phe Ser Ala Asp Ala Ala Val Val Val His Ala Ala
 275 280 285

Leu Asp Asp Ser Asp Phe Phe Thr Ser Tyr Tyr Thr Leu Gly Asn Ile
 290 295 300

Tyr Ala Met Leu Gly Glu Tyr Asn His Ser Val Leu Cys Tyr Asp His
 305 310 315 320

Ala Leu Gln Ala Arg Pro Gly Phe Glu Gln Ala Ile Lys Arg Lys His
 325 330 335

Ala Val Leu Cys Gln Gln Lys Leu Glu Gln Lys Leu Glu Ala Gln His
 340 345 350

Arg Ser Leu Gln Arg Thr Leu Asn Glu Leu Lys Glu Tyr Gln Lys Gln
 355 360 365

His Asp His Tyr Leu Arg Gln Gln Glu Ile Leu Glu Lys His Lys Leu
 370 375 380

Ile Gln Glu Glu Gln Ile Leu Arg Asn Ile Ile His Glu Thr Gln Met

385		390		395		400
Ala Lys Glu Ala Gln Leu Gly Asn His Gln Ile Cys Arg Leu Val Asn						
		405		410		415
Gln Gln His Ser Leu His Cys Gln Trp Asp Gln Pro Val Arg Tyr His						
		420		425		430
Arg Gly Asp Ile Phe Glu Asn Val Asp Tyr Val Gln Phe Gly Glu Asp						
		435		440		445
Ser Ser Thr Ser Ser Met Met Ser Val Asn Phe Asp Val Gln Ser Asn						
		450		455		460
Gln Ser Asp Ile Asn Asp Ser Val Lys Ser Ser Pro Val Ala His Ser						
		465		470		475
Ile Leu Trp Ile Trp Gly Arg Asp Ser Asp Ala Tyr Arg Asp Lys Gln						
		485		490		495
His Ile Leu Trp Pro Lys Arg Ala Asp Cys Thr Glu Ser Tyr Pro Arg						
		500		505		510
Val Pro Val Gly Gly Glu Leu Pro Thr Tyr Phe Leu Pro Pro Glu Asn						
		515		520		525
Lys Gly Leu Arg Ile His Glu Leu Ser Ser Asp Asp Tyr Ser Thr Glu						
		530		535		540
Glu Glu Ala Gln Thr Pro Asp Cys Ser Ile Thr Asp Phe Arg Lys Ser						
		545		550		555
His Thr Leu Ser Tyr Leu Val Lys Glu Leu Glu Val Arg Met Asp Leu						
		565		570		575
Lys Ala Lys Met Pro Asp Asp His Ala Arg Lys Ile Leu Leu Ser Arg						
		580		585		590
Ile Asn Asn Tyr Thr Ile Pro Glu Glu Glu Ile Gly Ser Phe Leu Phe						
		595		600		605
His Ala Ile Asn Lys Pro Asn Ala Pro Ile Trp Leu Ile Leu Asn Glu						
		610		615		620
Ala Gly Leu Tyr Trp Arg Ala Val Gly Asn Ser Thr Phe Ala Ile Ala						
		625		630		635
Cys Leu Gln Arg Ala Leu Asn Leu Ala Pro Leu Gln Tyr Gln Asp Val						
		645		650		655
Pro Leu Val Asn Leu Ala Asn Leu Leu Ile His Tyr Gly Leu His Leu						
		660		665		670
Asp Ala Thr Lys Leu Leu Leu Gln Ala Leu Ala Ile Asn Ser Ser Glu						
		675		680		685
Pro Leu Thr Phe Leu Ser Leu Gly Asn Ala Tyr Leu Ala Leu Lys Asn						
		690		695		700

Ile Ser Gly Ala Leu Glu Ala Phe Arg Gln Ala Leu Lys Leu Thr Thr
 705 710 715 720
 Lys Cys Pro Glu Cys Glu Asn Ser Leu Lys Leu Ile Arg Cys Met Gln
 725 730 735
 Phe Tyr Pro Phe Leu Tyr Asn Ile Thr Ser Ser Val Cys Ser Gly Thr
 740 745 750
 Val Val Glu Glu Ser Asn Gly Ser Asp Glu Met Glu Asn Ser Asp Glu
 755 760 765
 Thr Lys Met Ser Glu Glu Ile Leu Ala Leu Val Asp Glu Phe Gln Gln
 770 775 780
 Ala Trp Pro Leu Glu Gly Phe Gly Gly Ala Leu Glu Met Lys Gly Arg
 785 790 795 800
 Arg Leu Asp Leu Gln Gly Ile Arg Val Leu Lys Lys Gly Pro Gln Asp
 805 810 815
 Gly Val Ala Arg Ser Ser Cys Tyr Gly Asp Cys Arg Ser Glu Asp Asp
 820 825 830
 Glu Ala Thr Glu Trp Ile Thr Phe Gln Val Lys Arg Val Lys Lys Pro
 835 840 845
 Lys Gly Asp His Lys Lys Thr Pro Gly Lys Lys Val Glu Thr Gly Gln
 850 855 860
 Ile Glu Asn Gly His Arg Tyr Gln Ala Asn Leu Glu Ile Thr Gly Pro
 865 870 875 880
 Lys Val Ala Ser Pro Gly Pro Gln Gly
 885

<210> 45
 <211> 690
 <212> PRT
 <213> Homo sapiens

<400> 45
 Phe Leu Thr Leu Phe Ile Phe Arg Ser Gly Leu Cys Arg Gly Asn Ser
 1 5 10 15
 Val Glu Arg Lys Ile Tyr Ile Pro Leu Asn Lys Thr Ala Pro Cys Val
 20 25 30
 Arg Leu Leu Asn Ala Thr His Gln Ile Gly Cys Gln Ser Ser Ile Ser
 35 40 45
 Gly Asp Thr Gly Val Ile His Val Val Glu Lys Glu Glu Asp Leu Gln
 50 55 60
 Trp Val Leu Thr Asp Gly Pro Asn Pro Pro Tyr Met Val Leu Leu Glu
 65 70 75 80
 Ser Lys His Phe Thr Arg Asp Leu Met Glu Lys Leu Lys Gly Arg Thr

Ser	Arg	Ile	Ala	Gly	Leu	Ala	Val	Ser	Leu	Thr	Lys	Pro	Ser	Pro	Ala	
			100					105					110			
Ser	Gly	Phe	Ser	Pro	Ser	Val	Gln	Cys	Pro	Asn	Asp	Gly	Phe	Gly	Val	
			115					120					125			
Tyr	Ser	Asn	Ser	Tyr	Gly	Pro	Glu	Phe	Ala	His	Cys	Arg	Glu	Ile	Gln	
			130					135					140			
Trp	Asn	Ser	Leu	Gly	Asn	Gly	Leu	Ala	Tyr	Glu	Asp	Phe	Ser	Phe	Pro	
			145					150					155		160	
Ile	Phe	Leu	Leu	Glu	Asp	Glu	Asn	Glu	Thr	Lys	Val	Ile	Lys	Gln	Cys	
			165								170		175			
Tyr	Gln	Asp	His	Asn	Leu	Ser	Gln	Asn	Gly	Ser	Ala	Pro	Thr	Phe	Pro	
			180					185					190			
Leu	Cys	Ala	Met	Gln	Leu	Phe	Ser	His	Met	His	Ala	Val	Ile	Ser	Thr	
			195					200					205			
Ala	Thr	Cys	Met	Arg	Arg	Ser	Ser	Ile	Gln	Ser	Thr	Phe	Ser	Ile	Asn	
			210					215					220			
Pro	Glu	Ile	Val	Cys	Asp	Pro	Leu	Ser	Asp	Tyr	Asn	Val	Trp	Ser	Met	
			225					230					235		240	
Leu	Lys	Pro	Ile	Asn	Thr	Thr	Gly	Thr	Leu	Lys	Pro	Asp	Asp	Arg	Val	
			245								250		255			
Val	Val	Ala	Ala	Thr	Arg	Leu	Asp	Ser	Arg	Ser	Phe	Phe	Trp	Asn	Val	
			260					265					270			
Ala	Pro	Gly	Ala	Glu	Ser	Ala	Val	Ala	Ser	Phe	Val	Thr	Gln	Leu	Ala	
			275					280					285			
Ala	Ala	Glu	Ala	Leu	Gln	Lys	Ala	Pro	Asp	Val	Thr	Thr	Leu	Pro	Arg	
			290					295					300			
Asn	Val	Met	Phe	Val	Phe	Phe	Gln	Gly	Glu	Thr	Phe	Asp	Tyr	Ile	Gly	
			305					310					315		320	
Ser	Ser	Arg	Met	Val	Tyr	Asp	Met	Glu	Lys	Gly	Lys	Phe	Pro	Val	Gln	
			325								330		335			
Leu	Glu	Asn	Val	Asp	Ser	Phe	Val	Glu	Leu	Gly	Gln	Val	Ala	Leu	Arg	
			340					345					350			
Thr	Ser	Leu	Glu	Leu	Trp	Met	His	Thr	Asp	Pro	Val	Ser	Gln	Lys	Asn	
			355					360					365			
Glu	Ser	Val	Arg	Asn	Gln	Val	Glu	Asp	Leu	Leu	Ala	Thr	Leu	Glu	Lys	
			370					375					380			
Ser	Gly	Ala	Gly	Val	Pro	Ala	Val	Ile	Leu	Arg	Arg	Pro	Asn	Gln	Ser	
			385					390					395		400	

Gln Pro Leu Pro Pro Ser Ser Leu Gln Arg Phe Leu Arg Ala Arg Asn
 405 410 415
 Ile Ser Gly Val Val Leu Ala Asp His Ser Gly Ala Phe His Asn Lys
 420 425 430
 Tyr Tyr Gln Ser Ile Tyr Asp Thr Ala Glu Asn Ile Asn Val Ser Tyr
 435 440 445
 Pro Glu Trp Leu Ser Pro Glu Glu Asp Leu Asn Phe Val Thr Asp Thr
 450 455 460
 Ala Lys Ala Leu Ala Asp Val Ala Thr Val Leu Gly Arg Ala Leu Tyr
 465 470 475 480
 Glu Leu Ala Gly Gly Thr Asn Phe Ser Asp Thr Val Gln Ala Asp Pro
 485 490 495
 Gln Thr Val Thr Arg Leu Leu Tyr Gly Phe Leu Ile Lys Ala Asn Asn
 500 505 510
 Ser Trp Phe Gln Ser Ile Leu Arg Gln Asp Leu Arg Ser Tyr Leu Gly
 515 520 525
 Asp Gly Pro Leu Gln His Tyr Ile Ala Val Ser Ser Pro Thr Asn Thr
 530 535 540
 Thr Tyr Val Val Gln Tyr Ala Leu Ala Asn Leu Thr Gly Thr Val Val
 545 550 555 560
 Asn Leu Thr Arg Glu Gln Cys Gln Asp Pro Ser Lys Val Pro Ser Glu
 565 570 575
 Asn Lys Asp Leu Tyr Glu Tyr Ser Trp Val Gln Gly Pro Leu His Ser
 580 585 590
 Asn Glu Thr Asp Arg Leu Pro Arg Cys Val Arg Ser Thr Ala Arg Leu
 595 600 605
 Ala Arg Ala Leu Ser Pro Ala Phe Glu Leu Ser Gln Trp Ser Ser Thr
 610 615 620
 Glu Tyr Ser Thr Trp Thr Glu Ser Arg Trp Lys Asp Ile Arg Ala Arg
 625 630 635 640
 Ile Phe Leu Ile Ala Ser Lys Glu Leu Glu Leu Ile Thr Leu Thr Val
 645 650 655
 Gly Phe Gly Ile Leu Ile Phe Ser Leu Ile Val Thr Tyr Cys Ile Asn
 660 665 670
 Ala Lys Ala Asp Val Leu Phe Ile Ala Pro Arg Glu Pro Gly Ala Val
 675 680 685
 Ser Tyr
 690

<211> 170
 <212> PRT
 <213> Homo sapiens

<400> 46

Gln Val Pro Arg Ser Lys Ala Leu Glu Val Thr Lys Leu Ala Ile Glu
 1 5 10 15
 Ala Gly Phe Arg His Ile Asp Ser Ala His Leu Tyr Asn Asn Glu Glu
 20 25 30
 Gln Val Gly Leu Ala Ile Arg Ser Lys Ile Ala Asp Gly Ser Val Lys
 35 40 45
 Arg Glu Asp Ile Phe Tyr Thr Ser Lys Leu Trp Ser Thr Phe His Arg
 50 55 60
 Pro Glu Leu Val Arg Pro Ala Leu Glu Asn Ser Leu Lys Lys Ala Gln
 65 70 75 80
 Leu Asp Tyr Val Asp Leu Tyr Leu Ile His Ser Pro Met Ser Leu Lys
 85 90 95
 Pro Gly Glu Glu Leu Ser Pro Thr Asp Glu Gln Val Ala Lys Val Ile
 100 105 110
 Phe Asp Ile Val Asp Leu Cys Thr Thr Trp Glu Gly Met Glu Lys Cys
 115 120 125
 Lys Asp Gly Arg Asn Trp Gly Lys Ser Ile Gly Val Ser His Phe Asn
 130 135 140
 Pro Gln Ala Leu Gly Met Ser Leu Gln Lys Ala Gly Ile Gln Leu Lys
 145 150 155 160
 Arg Ser Ala Pro Val Glu Cys Pro Ile Tyr
 165 170

<210> 47
 <211> 1596
 <212> PRT
 <213> Homo sapiens

<400> 47

Met Thr Thr Glu Thr Gly Pro Asp Ser Glu Val Lys Lys Ala Gln Glu
 1 5 10 15
 Glu Ala Pro Gln Gln Pro Glu Ala Ala Ala Val Thr Thr Pro Val
 20 25 30
 Thr Pro Ala Gly His Gly His Pro Glu Ala Asn Ser Asn Glu Lys His
 35 40 45
 Pro Ser Gln Gln Asp Thr Arg Pro Ala Glu Gln Ser Leu Asp Met Glu
 50 55 60
 Glu Lys Asp Tyr Ser Glu Ala Asp Gly Leu Ser Glu Arg Thr Thr Pro
 65 70 75 80

Ser Lys Ala Gln Lys Ser Pro Gln Lys Ile Ala Lys Lys Tyr Lys Ser
 85 90 95
 Ala Ile Cys Arg Val Thr Leu Leu Asp Ala Ser Glu Tyr Glu Cys Glu
 100 105 110
 Val Glu Lys His Gly Arg Gly Gln Val Leu Phe Asp Leu Val Cys Glu
 115 120 125
 His Leu Asn Leu Leu Glu Lys Asp Tyr Phe Gly Leu Thr Phe Cys Asp
 130 135 140
 Ala Asp Ser Gln Lys Asn Trp Leu Asp Pro Ser Lys Glu Ile Lys Lys
 145 150 155 160
 Gln Ile Arg Ser Glu Trp Leu Val Val Phe Gly Glu Val Gly Ser Pro
 165 170 175
 Trp Asn Phe Ala Phe Thr Val Lys Phe Tyr Pro Pro Asp Pro Ala Gln
 180 185 190
 Leu Thr Glu Asp Ile Thr Arg Tyr Tyr Leu Cys Leu Gln Leu Arg Ala
 195 200 205
 Asp Ile Ile Thr Gly Arg Leu Pro Cys Ser Phe Val Thr His Ala Leu
 210 215 220
 Leu Gly Ser Tyr Ala Val Gln Ala Glu Leu Gly Asp Tyr Asp Ala Glu
 225 230 235 240
 Glu His Val Gly Asn Tyr Val Ser Glu Leu Arg Phe Ala Pro Asn Gln
 245 250 255
 Thr Arg Glu Leu Glu Glu Arg Ile Met Glu Leu His Lys Thr Tyr Arg
 260 265 270
 Gly Met Thr Pro Gly Glu Ala Glu Ile His Phe Leu Glu Asn Ala Lys
 275 280 285
 Lys Leu Ser Met Tyr Gly Val Asp Leu His His Ala Lys Asp Ser Glu
 290 295 300
 Gly Ile Asp Ile Met Leu Gly Val Cys Ala Asn Gly Leu Leu Ile Tyr
 305 310 315 320
 Arg Asp Arg Leu Arg Ile Asn Arg Phe Ala Trp Pro Lys Ile Leu Lys
 325 330 335
 Ile Ser Tyr Lys Arg Ser Asn Phe Tyr Ile Lys Ile Arg Pro Gly Glu
 340 345 350
 Tyr Glu Gln Phe Glu Ser Thr Ile Gly Phe Lys Leu Pro Asn His Arg
 355 360 365
 Ser Ala Lys Arg Leu Trp Lys Val Cys Ile Glu His His Thr Phe Phe
 370 375 380
 Arg Leu Val Ser Pro Glu Pro Pro Pro Lys Gly Phe Leu Val Met Gly

385		390		395		400
Ser Lys Phe Arg Tyr Ser Gly Arg Thr Gln Ala Gln Thr Arg Gln Ala						
		405		410		415
Ser Ala Leu Ile Asp Arg Pro Ala Pro Phe Phe Glu Arg Ser Ser Ser						
		420		425		430
Lys Arg Tyr Thr Met Ser Arg Ser Leu Asp Gly Ala Glu Phe Ser Arg						
		435		440		445
Pro Ala Ser Val Ser Glu Asn His Asp Ala Gly Pro Asp Gly Asp Lys						
		450		455		460
Arg Asp Glu Asp Gly Glu Ser Gly Gly Gln Arg Ser Glu Ala Glu Glu						
		465		470		475
Gly Glu Val Arg Thr Pro Thr Lys Ile Lys Glu Leu Lys Phe Leu Asp						
		485		490		495
Lys Pro Glu Asp Val Leu Leu Lys His Gln Ala Ser Ile Asn Glu Leu						
		500		505		510
Lys Arg Thr Leu Lys Glu Pro Asn Ser Lys Leu Ile His Arg Asp Arg						
		515		520		525
Asp Trp Glu Arg Glu Arg Arg Leu Pro Ser Ser Pro Ala Ser Pro Ser						
		530		535		540
Pro Lys Gly Thr Pro Glu Lys Ala Asn Glu Ser Gln Arg Thr Gln Asp						
		545		550		555
Ile Ser Gln Arg Asp Leu Val Pro Glu Pro Gly Ala Ala Ala Gly Leu						
		565		570		575
Glu Val Phe Thr Gln Lys Ser Leu Ala Ala Ser Pro Glu Gly Ser Glu						
		580		585		590
His Trp Val Phe Ile Glu Arg Glu Tyr Thr Arg Pro Glu Glu Leu Gly						
		595		600		605
Leu Leu Lys Val Thr Thr Met Gln Gln Glu Glu Arg Gln Ala Gly Leu						
		610		615		620
Ala Gly Ile Leu Ala Asn Gly Arg Leu Ser Lys Val Asp Val Leu Val						
		625		630		635
Asp Lys Phe Lys Val Glu Val Ala Thr Glu Glu Met Val Gly Asn Arg						
		645		650		655
Arg Ala Asn Thr Gln Gln Gln Gly Lys Met Ile Ala Ser Pro Glu Asp						
		660		665		670
Phe Glu Ser Val Gly Glu Glu Gly Pro Trp Ile Arg Glu Ser Pro Gly						
		675		680		685
Gly Ala Ala Leu Ala Ser Gly Arg Thr Leu Ala Glu Lys Leu Leu Glu						
		690		695		700

Gly Ser Glu Leu Arg Ala Asp Thr Arg Glu Ala Thr Ile Arg Asn Arg
 705 710 715 720
 Cys Met Ser Asp Gly Gln Pro Glu Gly Gln Thr Glu Leu Arg Lys Gly
 725 730 735
 Leu Glu Glu Pro His Thr Cys Gly Arg Pro Thr Ala Pro Gly Thr Arg
 740 745 750
 Pro Ala Glu Val Asp Val Leu Ser Pro Ala Ser Asp Lys Gly Gly Leu
 755 760 765
 Gln Ser Phe Leu Leu Asp Pro Ala His Ala Glu Ala Arg Ala Glu Leu
 770 775 780
 Ser Asn Glu Thr Asp Thr Ser Phe Ala Glu Arg Ser Phe Tyr Leu Asn
 785 790 795 800
 Tyr Glu Glu Lys Asp Ser Glu Asp Gln Val Leu Pro Pro Pro Leu Glu
 805 810 815
 Glu Arg Lys Gly Arg Leu Asp Ala Pro Pro Gly Gly Glu Pro Arg Pro
 820 825 830
 Thr Leu Asn Ser Leu Asp Leu Arg Val Ser Ala Ala Ala Ser Ser Arg
 835 840 845
 Ser Lys Asp Glu Ala His Met Thr Ser Pro Lys Glu Gly Ala Gly Thr
 850 855 860
 Pro Lys Asn His Gly Gly Pro Gly Asp Leu Lys Gly Ser Pro Ala Gly
 865 870 875 880
 Gln Thr Phe Ala Glu Gly Trp Glu Asp Ala Gln Trp Gly Val Glu Gly
 885 890 895
 Glu Phe Pro His Leu Thr Ala Ser Ala Ala Arg Glu Glu Gly Thr Pro
 900 905 910
 Val Ser Gly Asp Leu Leu Gly Lys Ala Glu Glu Ser Pro Thr Glu Glu
 915 920 925
 Leu Lys Lys His Pro Pro His Arg Gly Gln Gly Val His Pro Asp Pro
 930 935 940
 Gln Ala Cys Ala Leu Pro Arg Ala Ile Pro Leu Asn Val Arg Lys Pro
 945 950 955 960
 Val Lys Pro Asp Arg Gly Asn Phe Pro Pro Lys Glu Arg Gly Val Val
 965 970 975
 Pro Thr Gln Lys Gly Gly Ala Glu Leu Lys Asp Arg Glu Ala Ser Ala
 980 985 990
 Phe Leu His Met Glu Val Ile Ile Pro Leu Pro Ala Ser Pro Gly His
 995 1000 1005
 Ser Glu Asp Leu Ala Ala Leu Glu Glu Ala Ser Pro Ser Pro Thr Ser
 1010 1015 1020

His Gly Ser Gly Glu Pro Ser Glu Leu Arg Glu Pro Phe Leu Arg His
 1025 1030 1035 1040
 Val His Leu Ser Lys Ala Ser Pro Glu Pro Lys Asp Gln Val Gly Phe
 1045 1050 1055
 Val Val Ser Pro Ala Thr Gly Gly Glu Arg Arg Pro Pro Pro Ile Thr
 1060 1065 1070
 Ser Arg Lys Pro Arg Val Val Pro Glu Glu Ala Glu Gly Arg Ile Pro
 1075 1080 1085
 Leu Gly Phe Gly Phe Pro Ser Gly Lys Arg Arg Glu Met Thr Ser Phe
 1090 1095 1100
 Gln Ala Gly Asp Gln Glu Gly Ser Leu Glu Asp Ile Ser Lys Thr Ser
 1105 1110 1115 1120
 Val Ala Asn Lys Ile Arg Ile Phe Glu Thr His Gly Ala Glu Thr Arg
 1125 1130 1135
 Arg Met Ser Glu Gly Glu Ala Arg Ser Leu Pro Asn Asp Val Ser Ser
 1140 1145 1150
 Glu Ala Pro Val Gly Gln Ala Glu Gln Gln Arg Ser Thr Leu Ser Asp
 1155 1160 1165
 Leu Gly Phe Ala Gln Leu Gln Pro Pro Gly Asp Phe Ala Ser Pro Lys
 1170 1175 1180
 Ala Thr His Ser Thr Val Ile Pro Leu Ala Thr Arg His Phe Arg Glu
 1185 1190 1195 1200
 Asp Thr Ser Ala Ser Tyr Gln Glu Ala His Thr Glu Leu Glu Pro Val
 1205 1210 1215
 Ser Pro Asn Ser Gly Cys Glu Thr Thr Leu Ala Glu Ala Thr Gly Thr
 1220 1225 1230
 Gly Val Thr Gly Arg Asn Lys Ser Gly Asp Ala Val Arg Glu Glu Lys
 1235 1240 1245
 Arg Ser Thr Asn Leu Ala Ala Asn Thr Pro Gly Lys Gly Gly Arg Leu
 1250 1255 1260
 Arg Phe Ala Ser Pro Ser Gly Pro Gln Arg Ala Gly Leu Arg Glu Gly
 1265 1270 1275 1280
 Ser Glu Glu Lys Val Lys Pro Pro Arg Pro Arg Ala Pro Glu Ser Asp
 1285 1290 1295
 Thr Gly Asp Glu Asp Gln Asp Gln Glu Arg Asp Thr Val Phe Leu Lys
 1300 1305 1310
 Asp Asn His Leu Ala Ile Glu Arg Lys Cys Ser Ser Ile Thr Val Ser
 1315 1320 1325
 Ser Thr Ser Ser Leu Glu Ala Glu Val Asp Phe Thr Val Ile Gly Asp

1330	1335	1340
Tyr His Gly Ser Ala Phe Glu Asp Phe Ser Arg Ser Leu Pro Glu Leu		
1345	1350	1355 1360
Asp Arg Asp Lys Ser Asp Ser Asp Thr Glu Gly Leu Leu Phe Ser Arg		
	1365	1370 1375
Asp Leu Asn Lys Gly Ala Pro Ser Gln Asp Asp Glu Ser Gly Gly Ile		
	1380	1385 1390
Glu Asp Ser Pro Asp Arg Gly Ala Cys Ser Thr Pro Asp Met Pro Gln		
	1395	1400 1405
Phe Glu Pro Val Lys Thr Glu Thr Met Thr Val Ser Ser Leu Ala Ile		
	1410	1415 1420
Arg Lys Lys Ile Glu Pro Glu Ala Val Leu Gln Thr Arg Val Ser Ala		
	1425	1430 1435 1440
Met Asp Asn Thr Gln Val Asp Gly Ser Ala Ser Val Gly Arg Glu Phe		
	1445	1450 1455
Ile Ala Thr Thr Pro Ser Ile Thr Thr Glu Thr Ile Ser Thr Thr Met		
	1460	1465 1470
Glu Asn Ser Leu Lys Ser Gly Lys Gly Ala Ala Ala Met Ile Pro Gly		
	1475	1480 1485
Pro Gln Thr Val Ala Thr Glu Ile Arg Ser Leu Ser Pro Ile Ile Gly		
	1490	1495 1500
Lys Asp Val Leu Thr Ser Thr Tyr Gly Ala Thr Ala Glu Thr Leu Ser		
	1505	1510 1515 1520
Thr Ser Thr Thr Thr His Val Thr Lys Thr Val Lys Gly Gly Phe Ser		
	1525	1530 1535
Glu Thr Arg Ile Glu Lys Arg Ile Ile Ile Thr Gly Asp Glu Asp Val		
	1540	1545 1550
Asp Gln Asp Gln Ala Leu Ala Leu Ala Ile Lys Glu Ala Lys Leu Gln		
	1555	1560 1565
His Pro Asp Met Leu Val Thr Lys Ala Val Val Tyr Arg Glu Thr Asp		
	1570	1575 1580
Pro Ser Pro Glu Glu Arg Asp Lys Lys Pro Gln Lys		
	1585	1590 1595

<210> 48

<211> 455

<212> PRT

<213> Homo sapiens

<400> 48

Met	Ala	Ala	Pro	Glu	Glu	His	Asp	Ser	Pro	Thr	Glu	Ala	Ser	Gln	Pro
1									5					10	15

Ile Val Glu Glu Glu Glu Thr Lys Thr Phe Lys Asp Leu Gly Val Thr
 20 25 30
 Asp Val Leu Cys Glu Ala Cys Asp Gln Leu Gly Trp Thr Lys Pro Thr
 35 40 45
 Lys Ile Gln Ile Glu Ala Ile Pro Leu Ala Leu Gln Gly Arg Asp Ile
 50 55 60
 Ile Gly Leu Ala Glu Thr Gly Ser Gly Lys Thr Gly Ala Phe Ala Leu
 65 70 75 80
 Pro Ile Leu Asn Ala Leu Leu Glu Thr Pro Gln Arg Leu Phe Ala Leu
 85 90 95
 Val Leu Thr Pro Thr Arg Glu Leu Ala Phe Gln Ile Ser Glu Gln Phe
 100 105 110
 Glu Ala Leu Gly Ser Ser Ile Gly Val Gln Ser Ala Val Ile Val Gly
 115 120 125
 Gly Ile Asp Ser Met Ser Gln Ser Leu Ala Leu Ala Lys Lys Pro His
 130 135 140
 Ile Ile Ile Ala Thr Pro Gly Arg Leu Ile Asp His Leu Glu Asn Thr
 145 150 155 160
 Lys Gly Phe Asn Leu Arg Ala Leu Lys Tyr Leu Val Met Asp Glu Ala
 165 170 175
 Asp Arg Ile Leu Asn Met Asp Phe Glu Thr Glu Val Asp Lys Ile Leu
 180 185 190
 Lys Val Ile Pro Arg Asp Arg Lys Thr Phe Leu Phe Ser Ala Thr Met
 195 200 205
 Thr Lys Lys Val Gln Lys Leu Gln Arg Ala Ala Leu Lys Asn Pro Val
 210 215 220
 Lys Cys Ala Val Ser Ser Lys Tyr Gln Thr Val Glu Lys Leu Gln Gln
 225 230 235 240
 Tyr Tyr Ile Phe Ile Pro Ser Lys Phe Lys Asp Thr Tyr Leu Val Tyr
 245 250 255
 Ile Leu Asn Glu Leu Ala Gly Asn Ser Phe Met Ile Phe Cys Ser Thr
 260 265 270
 Cys Asn Asn Thr Gln Arg Thr Ala Leu Leu Leu Arg Asn Leu Gly Phe
 275 280 285
 Thr Ala Ile Pro Leu His Gly Gln Met Ser Gln Ser Lys Arg Leu Gly
 290 295 300
 Ser Leu Asn Lys Phe Lys Ala Lys Ala Arg Ser Ile Leu Leu Ala Thr
 305 310 315 320
 Asp Val Ala Ser Arg Gly Leu Asp Ile Pro His Val Asp Val Val Val

325	330	335
Asn Phe Asp Ile Pro Thr His Ser Lys Asp Tyr Ile His Arg Val Gly		
340	345	350
Arg Thr Ala Arg Ala Gly Arg Ser Gly Lys Ala Ile Thr Phe Val Thr		
355	360	365
Gln Tyr Asp Val Glu Leu Phe Gln Arg Ile Glu His Leu Ile Gly Lys		
370	375	380
Lys Leu Pro Gly Phe Pro Thr Gln Asp Asp Glu Val Met Met Leu Thr		
385	390	395
Glu Arg Val Ala Glu Ala Gln Arg Phe Ala Arg Met Glu Leu Arg Glu		
405	410	415
His Gly Glu Lys Lys Lys Arg Ser Arg Glu Asp Ala Gly Asp Asn Asp		
420	425	430
Asp Thr Glu Gly Ala Ile Gly Val Arg Asn Lys Val Ala Gly Gly Lys		
435	440	445
Met Lys Lys Arg Lys Gly Arg		
450	455	

<210> 49
 <211> 246
 <212> PRT
 <213> Homo sapiens

<400> 49
Met Ala Trp Ala Pro Leu Leu Leu Thr Leu Leu Ser Leu Leu Thr Gly
1 5 10 15
Ser Leu Ser Gln Pro Ile Leu Thr Gln Pro Pro Ser Ala Ser Ala Ser
20 25 30
Leu Gly Ala Ser Val Thr Leu Thr Cys Ser Val Ser Ser Asp Tyr Lys
35 40 45
Asn Leu Glu Val Asp Trp Phe Gln Gln Arg Pro Gly Lys Gly Pro Arg
50 55 60
Phe Val Met Arg Val Gly Thr Gly Gly Val Val Gly Phe Arg Gly Ala
65 70 75 80
Asp Ile Pro Asp Arg Phe Ser Val Ser Gly Ser Gly Leu Asn Arg Phe
85 90 95
Leu Thr Ile Arg Asn Ile Glu Glu Glu Asp Glu Ser Asp Tyr His Cys
100 105 110
Gly Thr Asp Leu Gly Ser Gly Thr Ser Phe Val Ser Trp Val Phe Gly
115 120 125
Gly Gly Thr Lys Leu Thr Val Leu Ser Gln Pro Lys Ala Ala Pro Ser
130 135 140

Val Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu Gln Ala Asn Lys Ala
 145 150 155 160

Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro Gly Ala Val Thr Val
 165 170 175

Ala Trp Lys Ala Asp Ser Ser Pro Val Lys Ala Gly Val Glu Thr Thr
 180 185 190

Thr Pro Ser Lys Gln Ser Asn Asn Lys Tyr Ala Ala Ser Ser Tyr Leu
 195 200 205

Ser Leu Thr Pro Glu Gln Trp Lys Ser Asn Arg Ser Tyr Ser Cys Gln
 210 215 220

Val Thr His Glu Gly Ser Thr Val Glu Lys Thr Val Ala Pro Thr Glu
 225 230 235 240

Cys Ser Thr Glu Cys Ser
 245

<210> 50
 <211> 228
 <212> PRT
 <213> Homo sapiens

<400> 50
 Ala Asn Ala Leu Gly Pro Cys Ala Glu Ile Val Met Thr Gln Thr Pro
 1 5 10 15

Leu Ser Leu Ser Ile Thr Pro Gly Glu Gln Ala Ser Met Ser Cys Arg
 20 25 30

Ser Ser Gln Ser Leu Leu His Ser Asp Gly Tyr Thr Tyr Leu Tyr Trp
 35 40 45

Phe Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Glu Val
 50 55 60

Ser Asn Arg Phe Ser Gly Val Ser Pro Ile Arg Phe Ser Gly Ser Gly
 65 70 75 80

Ser Gly Arg Glu Phe Thr Leu Arg Ile Ser Arg Val Glu Ala Asp Asp
 85 90 95

Ala Gly Val Tyr Tyr Cys Met Gln Thr Thr Gln Thr Pro Asn Thr Phe
 100 105 110

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg Thr Val Ala Ala Pro Ser
 115 120 125

Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala
 130 135 140

Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val
 145 150 155 160

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<210> 51
<211> 106
<212> PRT
<213> Homo sapiens
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<400>	51																
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1				5					10					15			
Glu	Glu	Leu	Gln	Ala	Asn	Lys	Ala	Thr	Leu	Val	Cys	Leu	Ile	Ser	Asp		
			20					25					30				
Phe	Tyr	Pro	Gly	Ala	Val	Thr	Val	Ala	Trp	Lys	Ala	Asp	Gly	Ser	Pro		
		35					40					45					
Val	Lys	Ala	Gly	Val	Glu	Thr	Thr	Lys	Pro	Ser	Lys	Gln	Ser	Asn	Asn		
	50					55					60						
Lys	Tyr	Ala	Ala	Ser	Ser	Tyr	Leu	Ser	Leu	Thr	Pro	Glu	Gln	Trp	Lys		
65					70					75					80		
Ser	His	Arg	Ser	Tyr	Ser	Cys	Gln	Val	Thr	His	Glu	Gly	Ser	Thr	Val		
				85					90					95			
Glu	Lys	Thr	Val	Ala	Pro	Thr	Glu	Cys	Ser								
			100					105									

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<210> 52
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<212> PRT
<213> Homo sapiens
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Arg Thr Gly Tyr Glu Glu Glu Thr Trp Asn Leu Lys Glu Cys Val Gly
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Arg Cys Ala Asn Pro Asn Val Asn Phe Leu Thr Lys Val Glu Ser Pro
20 25 30
Gly Met Val Gln Arg Trp Gly Leu Leu Leu Cys Arg Arg Asp Ser Arg
35 40 45

Phe Thr Pro Trp Gln Lys Ile Tyr
 50 55

<210> 53
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 <212> PRT
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<400> 53

Met Ala Phe Ala Ser Phe Arg Arg Ile Leu Ala Leu Ser Thr Phe Glu
 1 5 10 15

Lys Arg Lys Ser Arg Glu Tyr Glu His Val Arg Arg Asp Leu Asp Pro
 20 25 30

Asn Glu Val Trp Glu Ile Val Gly Glu Leu Gly Asp Gly Ser Phe Gly
 35 40 45

Met Val Tyr Lys Ala Lys Asn Lys Glu Thr Gly Ala Leu Ala Ala Ala
 50 55 60

Ile Val Ile Glu Thr Lys Ser Glu Glu Glu Leu Glu Asp Tyr Ile Val
 65 70 75 80

Glu Ile Glu Ile Leu Ala Thr Cys Asp His Pro Tyr Ile Val Lys Leu
 85 90 95

Leu Gly Ala Tyr Tyr His Asp Gly Lys Leu Trp Ile Met Ile Glu Phe
 100 105 110

Cys Pro Gly Gly Ala Val Asp Ala Ile Met Leu Glu Leu Asp Arg Gly
 115 120 125

Leu Thr Glu Pro Gln Ile Gln Val Val Cys Arg Gln Met Leu Glu Ala
 130 135 140

Leu Asn Phe Leu His Ser Lys Arg Ile Ile His Arg Asp Leu Lys Ala
 145 150 155 160

Gly Asn Val Leu Met Thr Leu Glu Gly Asp Ile Arg Leu Ala Asp Phe
 165 170 175

Gly Val Ser Ala Lys Asn Leu Lys Thr Leu Gln Lys Arg Asp Ser Phe
 180 185 190

Ile Gly Thr Pro Tyr Trp Met Ala Pro Glu Val Val Met Cys Glu Thr
 195 200 205

Met Lys Asp Thr Pro Tyr Asp Tyr Lys Ala Asp Ile Trp Ser Leu Gly
 210 215 220

Ile Thr Leu Ile Glu Met Ala Gln Ile Glu Pro Pro His His Glu Leu
 225 230 235 240

Asn Pro Met Arg Val Leu Leu Lys Ile Ala Lys Ser Asp Pro Pro Thr
 245 250 255

Leu Leu Thr Pro Ser Lys Trp Ser Val Glu Phe Arg Asp Phe Leu Lys

260	265	270
Ile Ala Leu Asp Lys Asn Pro Glu Thr Arg Pro Ser Ala Ala Ala Ala 275 280 285		
Leu Glu His Pro Phe Val Ser Ser Ile Thr Ser Asn Lys Ala Leu Arg 290 295 300		
Glu Leu Val Ala Glu Ala Lys Ala Glu Val Met Glu Glu Ile Glu Asp 305 310 315 320		
Gly Arg Asp Glu Gly Glu Glu Glu Asp Ala Val Asp Ala Ala Ser Thr 325 330 335		
Leu Glu Asn His Thr Gln Asn Ser Ser Glu Val Ser Pro Pro Ser Leu 340 345 350		
Asn Ala Asp Lys Pro Leu Glu Glu Ser Pro Ser Thr Pro Leu Ala Pro 355 360 365		
Ser Gln Ser Gln Asp Ser Val Asn Glu Pro Cys Ser Gln Pro Ser Gly 370 375 380		
Asp Arg Ser Leu Gln Thr Thr Ser Pro Pro Val Val Ala Pro Gly Asn 385 390 395 400		
Glu Asn Gly Leu Ala Val Pro Val Pro Leu Arg Lys Ser Arg Pro Val 405 410 415		
Ser Met Asp Ala Arg Ile Gln Val Ala Gln Glu Lys Gln Val Ala Glu 420 425 430		
Gln Gly Gly Asp Leu Ser Pro Ala Ala Asn Arg Ser Gln Lys Ala Ser 435 440 445		
Gln Ser Arg Pro Asn Ser Ser Ala Leu Glu Thr Leu Gly Gly Glu Lys 450 455 460		
Leu Ala Asn Gly Ser Leu Glu Pro Pro Ala Gln Ala Ala Pro Gly Pro 465 470 475 480		
Ser Lys Arg Asp Ser Asp Cys Ser Ser Leu Cys Thr Ser Glu Ser Met 485 490 495		
Asp Tyr Gly Thr Asn Leu Ser Thr Asp Leu Ser Leu Asn Lys Glu Met 500 505 510		
Gly Ser Leu Ser Ile Lys Asp Pro Lys Leu Tyr Lys Lys Thr Leu Lys 515 520 525		
Arg Thr Arg Lys Phe Val Val Asp Gly Val Glu Val Ser Ile Thr Thr 530 535 540		
Ser Lys Ile Ile Ser Glu Asp Glu Lys Lys Asp Glu Glu Met Arg Phe 545 550 555 560		
Leu Arg Arg Gln Glu Leu Arg Glu Leu Arg Leu Leu Gln Lys Glu Glu 565 570 575		

His Arg Asn Gln Thr Gln Leu Ser Asn Lys His Glu Leu Gln Leu Glu
 580 585 590
 Gln Met His Lys Arg Phe Glu Gln Glu Ile Asn Ala Lys Lys Lys Phe
 595 600 605
 Phe Asp Thr Glu Leu Glu Asn Leu Glu Arg Gln Gln Lys Gln Gln Val
 610 615 620
 Glu Lys Met Glu Gln Asp His Ala Val Arg Arg Arg Glu Glu Ala Arg
 625 630 635 640
 Arg Ile Arg Leu Glu Gln Asp Arg Asp Tyr Thr Arg Phe Gln Glu Gln
 645 650 655
 Leu Lys Leu Met Lys Lys Glu Val Lys Asn Glu Val Glu Lys Leu Pro
 660 665 670
 Arg Gln Gln Arg Lys Glu Ser Met Lys Gln Lys Met Glu Glu His Thr
 675 680 685
 Gln Lys Lys Gln Leu Leu Asp Arg Asp Phe Val Ala Lys Gln Lys Glu
 690 695 700
 Asp Leu Glu Leu Ala Met Lys Arg Leu Thr Thr Asp Asn Arg Arg Glu
 705 710 715 720
 Ile Cys Asp Lys Glu Arg Glu Cys Leu Met Lys Lys Gln Glu Leu Leu
 725 730 735
 Arg Asp Arg Glu Ala Ala Leu Trp Glu Met Glu Glu His Gln Leu Gln
 740 745 750
 Glu Arg His Gln Leu Val Lys Gln Gln Leu Lys Asp Gln Tyr Phe Leu
 755 760 765
 Gln Arg His Glu Leu Leu Arg Lys His Glu Lys Glu Arg Glu Gln Met
 770 775 780
 Gln Arg Tyr Asn Gln Arg Met Ile Glu Gln Leu Lys Val Arg Gln Gln
 785 790 795 800
 Gln Glu Lys Ala Arg Leu Pro Lys Ile Gln Arg Ser Glu Gly Lys Thr
 805 810 815
 Arg Met Ala Met Tyr Lys Lys Ser
 820

<210> 54
 <211> 1997
 <212> PRT
 <213> Homo sapiens

<400> 54
 Met Leu Ser His Gly Ala Gly Leu Ala Leu Trp Ile Thr Leu Ser Leu
 1 5 10 15

Leu Gln Thr Gly Leu Ala Glu Pro Glu Arg Cys Asn Phe Thr Leu Ala

Glu	Ser	Lys	Ala	Ser	Ser	His	Ser	Val	Ser	Ile	Gln	Trp	Arg	Ile	Leu
		35					40					45			
Gly	Ser	Pro	Cys	Asn	Phe	Ser	Leu	Ile	Tyr	Ser	Ser	Asp	Thr	Leu	Gly
	50					55					60				
Ala	Ala	Leu	Cys	Pro	Thr	Phe	Arg	Ile	Asp	Asn	Thr	Thr	Tyr	Gly	Cys
65					70					75					80
Asn	Leu	Gln	Asp	Leu	Gln	Ala	Gly	Thr	Ile	Tyr	Asn	Phe	Arg	Ile	Ile
				85					90					95	
Ser	Leu	Asp	Glu	Glu	Arg	Thr	Val	Val	Leu	Gln	Thr	Asp	Pro	Leu	Pro
			100					105					110		
Pro	Ala	Arg	Phe	Gly	Val	Ser	Lys	Glu	Lys	Thr	Thr	Ser	Thr	Ser	Leu
		115					120					125			
His	Val	Trp	Trp	Thr	Pro	Ser	Ser	Gly	Lys	Val	Thr	Ser	Tyr	Glu	Val
	130					135					140				
Gln	Leu	Phe	Asp	Glu	Asn	Asn	Gln	Lys	Ile	Gln	Gly	Val	Gln	Ile	Gln
145					150					155					160
Glu	Ser	Thr	Ser	Trp	Asn	Glu	Tyr	Thr	Phe	Phe	Asn	Leu	Thr	Ala	Gly
				165					170					175	
Ser	Lys	Tyr	Asn	Ile	Ala	Ile	Thr	Ala	Val	Ser	Gly	Gly	Lys	Arg	Ser
			180					185					190		
Phe	Ser	Val	Tyr	Thr	Asn	Gly	Ser	Thr	Val	Pro	Ser	Pro	Val	Lys	Asp
		195					200					205			
Ile	Gly	Ile	Ser	Thr	Lys	Ala	Asn	Ser	Leu	Leu	Ile	Ser	Trp	Ser	His
	210					215					220				
Gly	Ser	Gly	Asn	Val	Glu	Arg	Tyr	Arg	Leu	Met	Leu	Met	Asp	Lys	Gly
225					230					235					240
Ile	Leu	Val	His	Gly	Gly	Val	Val	Asp	Lys	His	Ala	Thr	Ser	Tyr	Ala
				245					250					255	
Phe	His	Gly	Leu	Ser	Pro	Gly	Tyr	Leu	Tyr	Asn	Leu	Thr	Val	Met	Thr
			260					265					270		
Glu	Ala	Ala	Gly	Leu	Gln	Asn	Tyr	Arg	Trp	Lys	Leu	Val	Arg	Thr	Ala
		275					280					285			
Pro	Met	Glu	Val	Ser	Asn	Leu	Lys	Val	Thr	Asn	Asp	Gly	Ser	Leu	Thr
		290				295					300				
Ser	Leu	Lys	Val	Lys	Trp	Gln	Arg	Pro	Pro	Gly	Asn	Val	Asp	Ser	Tyr
305					310					315					320
Asn	Ile	Thr	Leu	Ser	His	Lys	Gly	Thr	Ile	Lys	Glu	Ser	Arg	Val	Leu
				325					330					335	

Ala Pro Trp Ile Thr Glu Thr His Phe Lys Glu Leu Val Pro Gly Arg
 340 345 350
 Leu Tyr Gln Val Thr Val Ser Cys Val Ser Gly Glu Leu Ser Ala Gln
 355 360 365
 Lys Met Ala Val Gly Arg Thr Phe Pro Asp Lys Val Ala Asn Leu Glu
 370 375 380
 Ala Asn Asn Asn Gly Arg Met Arg Ser Leu Val Val Ser Trp Ser Pro
 385 390 395 400
 Pro Ala Gly Asp Trp Glu Gln Tyr Arg Ile Leu Leu Phe Asn Asp Ser
 405 410 415
 Val Val Leu Leu Asn Ile Thr Val Gly Lys Glu Glu Thr Gln Tyr Val
 420 425 430
 Met Asp Asp Thr Gly Leu Val Pro Gly Arg Gln Tyr Glu Val Glu Val
 435 440 445
 Ile Val Glu Ser Gly Asn Leu Lys Asn Ser Glu Arg Cys Gln Gly Arg
 450 455 460
 Thr Val Pro Leu Ala Val Leu Gln Leu Arg Val Lys His Ala Asn Glu
 465 470 475 480
 Thr Ser Leu Ser Ile Met Trp Gln Thr Pro Val Ala Glu Trp Glu Lys
 485 490 495
 Tyr Ile Ile Ser Leu Ala Asp Arg Asp Leu Leu Leu Ile His Lys Ser
 500 505 510
 Leu Ser Lys Asp Ala Lys Glu Phe Thr Phe Thr Asp Leu Val Pro Gly
 515 520 525
 Arg Lys Tyr Met Ala Thr Val Thr Ser Ile Ser Gly Asp Leu Lys Asn
 530 535 540
 Ser Ser Ser Val Lys Gly Arg Thr Val Pro Ala Gln Val Thr Asp Leu
 545 550 555 560
 His Val Ala Asn Gln Gly Met Thr Ser Ser Leu Phe Thr Asn Trp Thr
 565 570 575
 Gln Ala Gln Gly Asp Val Glu Phe Tyr Gln Val Leu Leu Ile His Glu
 580 585 590
 Asn Val Val Ile Lys Asn Glu Ser Ile Ser Ser Glu Thr Ser Arg Tyr
 595 600 605
 Ser Phe His Ser Leu Lys Ser Gly Ser Leu Tyr Ser Val Val Val Thr
 610 615 620
 Thr Val Ser Gly Gly Ile Ser Ser Arg Gln Val Val Val Glu Gly Arg
 625 630 635 640
 Thr Val Pro Ser Ser Val Ser Gly Val Thr Val Asn Asn Ser Gly Arg
 645 650 655

Asn Asp Tyr Leu Ser Val Ser Trp Leu Val Ala Pro Gly Asp Val Asp
 660 665 670
 Asn Tyr Glu Val Thr Leu Ser His Asp Gly Lys Val Val Gln Ser Leu
 675 680 685
 Val Ile Ala Lys Ser Val Arg Glu Cys Ser Phe Ser Ser Leu Thr Pro
 690 695 700
 Gly Arg Leu Tyr Thr Val Thr Ile Thr Thr Arg Ser Gly Lys Tyr Glu
 705 710 715 720
 Asn His Ser Phe Ser Gln Glu Arg Thr Val Pro Asp Lys Val Gln Gly
 725 730 735
 Val Ser Val Ser Asn Ser Ala Arg Ser Asp Tyr Leu Arg Val Ser Trp
 740 745 750
 Val Tyr Ala Thr Gly Asp Phe Asp His Tyr Glu Val Thr Ile Lys Asn
 755 760 765
 Lys Asn Asn Phe Ile Gln Thr Lys Ser Ile Pro Lys Ser Glu Asn Glu
 770 775 780
 Cys Val Phe Val Gln Leu Val Pro Gly Arg Leu Tyr Ser Val Thr Val
 785 790 795 800
 Thr Thr Lys Ser Gly Gln Tyr Glu Ala Asn Glu Gln Gly Asn Gly Arg
 805 810 815
 Thr Ile Pro Glu Pro Val Lys Asp Leu Thr Leu Arg Asn Arg Ser Thr
 820 825 830
 Glu Asp Leu His Val Thr Trp Ser Gly Ala Asn Gly Asp Val Asp Gln
 835 840 845
 Tyr Glu Ile Gln Leu Leu Phe Asn Asp Met Lys Val Phe Pro Pro Phe
 850 855 860
 His Leu Val Asn Thr Ala Thr Glu Tyr Arg Phe Thr Ser Leu Thr Pro
 865 870 875 880
 Gly Arg Gln Tyr Lys Ile Leu Val Leu Thr Ile Ser Gly Asp Val Gln
 885 890 895
 Gln Ser Ala Phe Ile Glu Gly Phe Thr Val Pro Ser Ala Val Lys Asn
 900 905 910
 Ile His Ile Ser Pro Asn Gly Ala Thr Asp Ser Leu Thr Val Asn Trp
 915 920 925
 Thr Pro Gly Gly Gly Asp Val Asp Ser Tyr Thr Val Ser Ala Phe Arg
 930 935 940
 His Ser Gln Lys Val Asp Ser Gln Thr Ile Pro Lys His Val Phe Glu
 945 950 955 960
 His Thr Phe His Arg Leu Glu Ala Gly Glu Gln Tyr Gln Ile Met Ile

965	970	975
Ala Ser Val Ser Gly Ser Leu Lys Asn Gln Ile Asn Val Val Gly Arg 980 985 990		
Thr Val Pro Ala Ser Val Gln Gly Val Ile Ala Asp Asn Ala Tyr Ser 995 1000 1005		
Ser Tyr Ser Leu Ile Val Ser Trp Gln Lys Ala Ala Gly Val Ala Glu 1010 1015 1020		
Arg Tyr Asp Ile Leu Leu Leu Thr Glu Asn Gly Ile Leu Leu Arg Asn 1025 1030 1035 1040		
Thr Ser Glu Pro Ala Thr Thr Lys Gln His Lys Phe Glu Asp Leu Thr 1045 1050 1055		
Pro Gly Lys Lys Tyr Lys Ile Gln Ile Leu Thr Val Ser Gly Gly Leu 1060 1065 1070		
Phe Ser Lys Glu Ala Gln Thr Glu Gly Arg Thr Val Pro Ala Ala Val 1075 1080 1085		
Thr Asp Leu Arg Ile Thr Glu Asn Ser Thr Arg His Leu Ser Phe Arg 1090 1095 1100		
Trp Thr Ala Ser Glu Gly Glu Leu Ser Trp Tyr Asn Ile Phe Leu Tyr 1105 1110 1115 1120		
Asn Pro Asp Gly Asn Leu Gln Glu Arg Ala Gln Val Asp Pro Leu Val 1125 1130 1135		
Gln Ser Phe Ser Phe Gln Asn Leu Leu Gln Gly Arg Met Tyr Lys Met 1140 1145 1150		
Val Ile Val Thr His Ser Gly Glu Leu Ser Asn Glu Ser Phe Ile Phe 1155 1160 1165		
Gly Arg Thr Val Pro Ala Ser Val Ser His Leu Arg Gly Ser Asn Arg 1170 1175 1180		
Asn Thr Thr Asp Ser Leu Trp Phe Asn Trp Ser Pro Ala Ser Gly Asp 1185 1190 1195 1200		
Phe Asp Phe Tyr Glu Leu Ile Leu Tyr Asn Pro Asn Gly Thr Lys Lys 1205 1210 1215		
Glu Asn Trp Lys Asp Lys Asp Leu Thr Glu Trp Arg Phe Gln Gly Leu 1220 1225 1230		
Val Pro Gly Arg Lys Tyr Val Leu Trp Val Val Thr His Ser Gly Asp 1235 1240 1245		
Leu Ser Asn Lys Val Thr Ala Glu Ser Arg Thr Ala Pro Ser Pro Pro 1250 1255 1260		
Ser Leu Met Ser Phe Ala Asp Ile Ala Asn Thr Ser Leu Ala Ile Thr 1265 1270 1275 1280		

Trp Lys Gly Pro Pro Asp Trp Thr Asp Tyr Asn Asp Phe Glu Leu Gln
 1285 1290 1295
 Trp Leu Pro Arg Asp Ala Leu Thr Val Phe Asn Pro Tyr Asn Asn Arg
 1300 1305 1310
 Lys Ser Glu Gly Arg Ile Val Tyr Gly Leu Arg Pro Gly Arg Ser Tyr
 1315 1320 1325
 Gln Phe Asn Val Lys Thr Val Ser Gly Asp Ser Trp Lys Thr Tyr Ser
 1330 1335 1340
 Lys Pro Ile Phe Gly Ser Val Arg Thr Lys Pro Asp Lys Ile Gln Asn
 1345 1350 1355 1360
 Leu His Cys Arg Pro Gln Asn Ser Thr Ala Ile Ala Cys Ser Trp Ile
 1365 1370 1375
 Pro Pro Asp Ser Asp Phe Asp Gly Tyr Ser Ile Glu Cys Arg Lys Met
 1380 1385 1390
 Asp Thr Gln Glu Val Glu Phe Ser Arg Lys Leu Glu Lys Glu Lys Ser
 1395 1400 1405
 Leu Leu Asn Ile Met Met Leu Val Pro His Lys Arg Tyr Leu Val Ser
 1410 1415 1420
 Ile Lys Val Gln Ser Ala Gly Met Thr Ser Glu Val Val Glu Asp Ser
 1425 1430 1435 1440
 Thr Ile Thr Met Ile Asp Arg Pro Pro Pro Pro Pro Pro His Ile Arg
 1445 1450 1455
 Val Asn Glu Lys Asp Val Leu Ile Ser Lys Ser Ser Ile Asn Phe Thr
 1460 1465 1470
 Val Asn Cys Ser Trp Phe Ser Asp Thr Asn Gly Ala Val Lys Tyr Phe
 1475 1480 1485
 Thr Val Val Val Arg Glu Ala Asp Gly Ser Asp Glu Leu Lys Pro Glu
 1490 1495 1500
 Gln Gln His Pro Leu Pro Ser Tyr Leu Glu Tyr Arg His Asn Ala Ser
 1505 1510 1515 1520
 Ile Arg Val Tyr Gln Thr Asn Tyr Phe Ala Ser Lys Cys Ala Glu Asn
 1525 1530 1535
 Pro Asn Ser Asn Ser Lys Ser Phe Asn Ile Lys Leu Gly Ala Glu Met
 1540 1545 1550
 Glu Ser Leu Gly Gly Lys Cys Asp Pro Thr Gln Gln Lys Phe Cys Asp
 1555 1560 1565
 Gly Pro Leu Lys Pro His Thr Ala Tyr Arg Ile Ser Ile Arg Ala Phe
 1570 1575 1580
 Thr Gln Leu Phe Asp Glu Asp Leu Lys Glu Phe Thr Lys Pro Leu Tyr
 1585 1590 1595 1600

Ser Asp Thr Phe Phe Ser Leu Pro Ile Thr Thr Glu Ser Glu Pro Leu
 1605 1610 1615
 Phe Gly Ala Ile Glu Gly Val Ser Ala Gly Leu Phe Leu Ile Gly Met
 1620 1625 1630
 Leu Val Ala Val Val Ala Leu Leu Ile Cys Arg Gln Lys Val Ser His
 1635 1640 1645
 Gly Arg Glu Arg Pro Ser Ala Arg Leu Ser Ile Arg Arg Asp Arg Pro
 1650 1655 1660
 Leu Ser Val His Leu Asn Leu Gly Gln Lys Gly Asn Arg Lys Thr Ser
 1665 1670 1675 1680
 Cys Pro Ile Lys Ile Asn Gln Phe Glu Gly His Phe Met Lys Leu Gln
 1685 1690 1695
 Ala Asp Ser Asn Tyr Leu Leu Ser Lys Glu Tyr Glu Glu Leu Lys Asp
 1700 1705 1710
 Val Gly Arg Asn Gln Ser Cys Asp Ile Ala Leu Leu Pro Glu Asn Arg
 1715 1720 1725
 Gly Lys Asn Arg Tyr Asn Asn Ile Leu Pro Tyr Asp Ala Thr Arg Val
 1730 1735 1740
 Lys Leu Ser Asn Val Asp Asp Asp Pro Cys Ser Asp Tyr Ile Asn Ala
 1745 1750 1755 1760
 Ser Tyr Ile Pro Gly Asn Asn Phe Arg Arg Glu Tyr Ile Val Thr Gln
 1765 1770 1775
 Gly Pro Leu Pro Gly Thr Lys Asp Asp Phe Trp Lys Met Val Trp Glu
 1780 1785 1790
 Gln Asn Val His Asn Ile Val Met Val Thr Gln Cys Val Glu Lys Gly
 1795 1800 1805
 Arg Val Lys Cys Asp His Tyr Trp Pro Ala Asp Gln Asp Ser Leu Tyr
 1810 1815 1820
 Tyr Gly Asp Leu Ile Leu Gln Met Leu Ser Glu Ser Val Leu Pro Glu
 1825 1830 1835 1840
 Trp Thr Ile Arg Glu Phe Lys Ile Cys Gly Glu Glu Gln Leu Asp Ala
 1845 1850 1855
 His Arg Leu Ile Arg His Phe His Tyr Thr Val Trp Pro Asp His Gly
 1860 1865 1870
 Val Pro Glu Thr Thr Gln Ser Leu Ile Gln Phe Val Arg Thr Val Arg
 1875 1880 1885
 Asp Tyr Ile Asn Arg Ser Pro Gly Ala Gly Pro Thr Val Val His Cys
 1890 1895 1900
 Ser Ala Gly Val Gly Arg Thr Gly Thr Phe Ile Ala Leu Asp Arg Ile

<400> 55															
Met	Lys	Leu	Leu	Val	Ile	Leu	Leu	Phe	Ser	Gly	Leu	Ile	Thr	Gly	Phe
1				5					10					15	
Arg	Ser	Asp	Ser	Ser	Ser	Ser	Leu	Pro	Pro	Lys	Leu	Leu	Leu	Val	Ser
			20					25					30		
Phe	Asp	Gly	Phe	Arg	Ala	Asp	Tyr	Leu	Lys	Asn	Tyr	Glu	Phe	Pro	His
		35					40					45			
Leu	Gln	Asn	Phe	Ile	Lys	Glu	Gly	Val	Leu	Val	Glu	His	Val	Lys	Asn
	50					55					60				
Val	Phe	Ile	Thr	Lys	Thr	Phe	Pro	Asn	His	Tyr	Ser	Ile	Val	Thr	Gly
65					70					75					80
Leu	Tyr	Glu	Glu	Ser	His	Gly	Ile	Val	Ala	Asn	Ser	Met	Tyr	Asp	Ala
				85					90					95	
Val	Thr	Lys	Lys	His	Phe	Ser	Asp	Ser	Asn	Asp	Lys	Asp	Pro	Phe	Trp
			100					105					110		
Trp	Asn	Glu	Ala	Val	Pro	Ile	Trp	Val	Thr	Asn	Gln	Leu	Gln	Glu	Asn
		115					120					125			
Arg	Ser	Ser	Ala	Ala	Ala	Met	Trp	Pro	Gly	Thr	Asp	Val	Pro	Ile	His
	130					135					140				
Asp	Thr	Ile	Ser	Ser	Tyr	Phe	Met	Asn	Tyr	Asn	Ser	Ser	Val	Ser	Phe
145					150					155					160
Glu	Glu	Arg	Leu	Asn	Asn	Ile	Thr	Met	Trp	Leu	Asn	Asn	Ser	Asn	Pro
				165					170					175	
Pro	Val	Thr	Phe	Ala	Thr	Leu	Tyr	Trp	Glu	Glu	Pro	Asp	Ala	Ser	Gly
			180					185					190		

His Lys Tyr Gly Pro Glu Asp Lys Glu Asn Met Ser Arg Val Leu Lys
 195 200 205
 Lys Ile Asp Asp Leu Ile Gly Asp Leu Val Gln Arg Leu Lys Met Leu
 210 215 220
 Gly Leu Trp Glu Asn Leu Asn Val Ile Ile Thr Ser Asp His Gly Met
 225 230 235 240
 Thr Gln Cys Ser Gln Asp Arg Leu Ile Asn Leu Asp Ser Cys Ile Asp
 245 250 255
 His Ser Tyr Tyr Thr Leu Ile Asp Leu Ser Pro Val Ala Ala Ile Leu
 260 265 270
 Pro Lys Ile Asn Arg Thr Glu Val Tyr Asn Lys Leu Lys Asn Cys Ser
 275 280 285
 Pro His Met Asn Val Tyr Leu Lys Glu Asp Ile Pro Asn Arg Phe Tyr
 290 295 300
 Tyr Gln His Asn Asp Arg Ile Gln Pro Ile Ile Leu Val Ala Asp Glu
 305 310 315 320
 Gly Trp Thr Ile Val Leu Asn Glu Ser Ser Gln Lys Leu Gly Asp His
 325 330 335
 Gly Tyr Asp Asn Ser Leu Pro Ser Met His Pro Phe Leu Ala Ala His
 340 345 350
 Gly Pro Ala Phe His Lys Gly Tyr Lys His Ser Thr Ile Asn Ile Val
 355 360 365
 Asp Ile Tyr Pro Met Met Cys His Ile Leu Gly Leu Lys Pro His Pro
 370 375 380
 Asn Asn Gly Thr Phe Gly His Thr Lys Cys Leu Leu Val Asp Gln Trp
 385 390 395 400
 Cys Ile Asn Leu Pro Glu Ala Ile Ala Ile Val Ile Gly Ser Leu Leu
 405 410 415
 Val Leu Thr Met Leu Thr Cys Leu Ile Ile Ile Met Gln Asn Arg Leu
 420 425 430
 Ser Val Pro Arg Pro Phe Ser Arg Leu Gln Leu Gln Glu Asp Asp Asp
 435 440 445
 Asp Pro Leu Ile Gly
 450

<210> 56
 <211> 537
 <212> PRT
 <213> Homo sapiens

<400> 56

Met	Ser	Lys	Pro	His	Ser	Glu	Ala	Gly	Thr	Ala	Phe	Ile	Gln	Thr	Gln	1	5	10	15
Gln	Leu	His	Ala	Ala	Met	Ala	Asp	Thr	Phe	Leu	Glu	His	Met	Cys	Arg	20	25	30	
Leu	Asp	Ile	Asp	Ser	Pro	Pro	Ile	Thr	Ala	Arg	Asn	Thr	Gly	Ile	Ile	35	40	45	
Cys	Thr	Ile	Gly	Pro	Ala	Ser	Arg	Ser	Val	Glu	Thr	Leu	Lys	Glu	Met	50	55	60	
Ile	Lys	Ser	Gly	Met	Asn	Val	Ala	Arg	Leu	Asn	Phe	Ser	His	Gly	Thr	65	70	75	80
His	Glu	Tyr	His	Ala	Glu	Thr	Ile	Lys	Asn	Val	Arg	Thr	Ala	Thr	Glu	85	90	95	
Ser	Phe	Ala	Ser	Asp	Pro	Ile	Leu	Tyr	Arg	Pro	Val	Ala	Val	Ala	Leu	100	105	110	
Asp	Thr	Lys	Gly	Pro	Glu	Ile	Arg	Thr	Gly	Leu	Ile	Lys	Gly	Ser	Gly	115	120	125	
Thr	Ala	Glu	Val	Glu	Leu	Lys	Lys	Gly	Ala	Thr	Leu	Lys	Ile	Thr	Leu	130	135	140	
Asp	Asn	Ala	Tyr	Met	Glu	Lys	Cys	Asp	Glu	Asn	Ile	Leu	Trp	Leu	Asp	145	150	155	160
Tyr	Lys	Asn	Ile	Cys	Lys	Val	Val	Glu	Val	Gly	Ser	Lys	Ile	Tyr	Val	165	170	175	
Asp	Asp	Gly	Leu	Ile	Ser	Leu	Gln	Val	Lys	Gln	Lys	Gly	Ala	Asp	Phe	180	185	190	
Leu	Val	Thr	Glu	Val	Glu	Asn	Gly	Gly	Ser	Leu	Gly	Ser	Lys	Lys	Gly	195	200	205	
Val	Asn	Leu	Pro	Gly	Ala	Ala	Val	Asp	Leu	Pro	Ala	Val	Ser	Glu	Lys	210	215	220	
Asp	Ile	Pro	Gly	Ser	Glu	Ser	Leu	Gly	Val	Glu	Gln	Asp	Val	Asp	Met	225	230	235	240
Val	Phe	Ala	Ser	Phe	His	Pro	Ala	Lys	Ala	Ser	Gly	Cys	Pro	Met	Glu	245	250	255	
Ala	Leu	Gly	Ala	Val	Leu	Gly	Arg	Glu	Gly	Lys	Arg	Asn	Ile	Lys	Ile	260	265	270	
Ile	Ser	Lys	Ile	Glu	Asn	His	Glu	Gly	Val	Arg	Arg	Phe	Asp	Glu	Ile	275	280	285	
Leu	Glu	Ala	Ser	Asp	Gly	Ile	Met	Val	Ala	Arg	Gly	Asp	Leu	Gly	Ile	290	295	300	
Glu	Ile	Pro	Ala	Glu	Lys	Val	Phe	Leu	Ala	Gln	Lys	Met	Met	Ile	Gly	305	310	315	320

Arg Cys Asn Pro Arg Thr Gly Lys Pro Val Ile Cys Ala Thr Gln Met
 325 330 335
 Leu Glu Ser Ile Ile Lys Lys Pro Arg Pro Thr Arg Ala Glu Gly Ser
 340 345 350
 Asp Val Ala Asn Ala Val Leu Asp Gly Ala Asp Cys Ile Met Leu Ser
 355 360 365
 Gly Glu Thr Ala Lys Gly Asp Tyr Pro Leu Glu Ala Val Arg Met Gln
 370 375 380
 His Leu Ile Ala Arg Glu Ala Glu Ala Ala Ile Tyr His Leu Gln Leu
 385 390 395 400
 Phe Glu Glu Leu Arg Arg Leu Ala Pro Ile Thr Ser Asp Pro Thr Glu
 405 410 415
 Ala Thr Ala Val Gly Ala Val Glu Ala Ser Phe Lys Cys Cys Ser Gly
 420 425 430
 Ala Ile Ile Val Leu Thr Lys Ser Gly Arg Ser Ala His Gln Val Ala
 435 440 445
 Arg Tyr Arg Pro Arg Ala Pro Ile Ile Ala Val Thr Arg Asn Pro Gln
 450 455 460
 Thr Ala Arg Gln Ala His Leu Tyr Arg Gly Ile Phe Pro Val Leu Cys
 465 470 475 480
 Lys Asp Pro Val Gln Glu Ala Trp Ala Glu Asp Val Asp Leu Arg Val
 485 490 495
 Asn Phe Ala Met Asn Val Gly Lys Ala Arg Gly Phe Phe Lys Lys Gly
 500 505 510
 Asp Val Val Ile Val Leu Thr Gly Trp Arg Pro Gly Ser Gly Phe Thr
 515 520 525
 Asn Thr Met Arg Val Val Pro Val Pro
 530 535